Air in African Cities

HOW TO PROPERLY ADDRESS SERIOUS PROBLEMS IN AN ALREADY CHALLENGED AREA OF OUR WORLD

This theme will explore the links between air pollution and sustainable urban development in African cities. Many parts of Africa face challenges such as malnutrition, inadequate health care, effects of climate change, and political and economic instabilities. On top of all this, outdoor air quality in African cities is deteriorating due to growing urbanization. Indoor emissions from biomass burning in cook-stoves also affects a large part of the population, especially women and young children. Even though air pollution is the major environmental threat to human health, air pollution research in Africa is almost completely lacking.

Adequate, sustainable solutions require interdisciplinary approaches. Our aim is to bridge different research areas in order to understand the medical, environmental, political, cultural impact of air pollution exposure from both indoor and outdoor sources in Africa.

We are an interdisciplinary team of young researchers who will combine expertise from several areas, aerosol science, atmospheric modelling, sociology of law, epidemiology, toxicology, sustainable development and environmental science in a joint effort to evaluate environmental health risks in such details so proper actions can be taken.

We will focus on:

1. Polluted air and its impact on well-being outdoors, at home, at work and in the public spaces
With an interdisciplinary approach, we will assess different nuances of this problem, knowledge of importance for future health impact assessments.

2. Technological and cultural drivers of air pollution
We will identify the most important drivers regarding air pollution in different African cities as well as the regional differences. Can impacts such as health costs and infrastructure costs be calculated and how, and when, and to whom are we addressing this issue in the most efficient way?

3. Innovations for cleaner air: costs, drivers and benefits
We will explore how to combine technological innovations, urban planning, and social norms to provide affordable solutions to reduce air pollution in homes and public spaces.

Members

Christina Isaxon, PhD (coordinator)
Assistant professor, Ergonomics and Aerosol Technology
Department of Design sciences
Faculty of Engineering, Lund University
Christina.isaxon@design.lth.se
+46 46 222 39 35
http://portal.research.lu.se/portal/en/persons/christina-isaxon(afd05691-77d1-4aad-8657-373525b53459).html#Overview

Ebba Malmqvist, PhD (coordinator)
Assistant Researcher, Occupational and Environmental Medicine
Department of Laboratory medicine
Faculty of Medicine, Lund University

Group members of the theme "The Air in African cities